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# NASA TECH BRIEF



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## Solar Activity History Model

A solar activity model has been devised to provide information on solar activity history. The model includes data for plagues, sunspots, filaments, and flares. The purpose of the model is to enable scheduling which will indicate the time periods when solar experiments can be conducted.

Data were collected at various locations throughout the world and recorded on tape for the computer. The motion of sunspots and plagues around the sun is dependent on their solar latitude. A reference coordinate system was defined. The solar axis is defined to be inclined 7.25 degrees from the pole of the ecliptic and to be oriented so that the ascending node of the solar equator is 73.667 degrees + 50.25t seconds, where t is the time in years since 1850. The reference (0 degree) meridian is the meridian that passed through the ascending node of the solar equator at mean noon January 1, 1854, and whose interaction with the solar equator moves around the equator with a period of

25.38 days. The solar equator and reference meridian provide the origin for heliographic latitude and longitude.

### Notes:

1. This information may be of interest to astronomers and meteorologists.
2. Requests for further information may be directed to:

Technology Utilization Officer  
Marshall Space Flight Center  
Huntsville, Alabama 35812  
Reference: TSP69-10776

### Patent status:

No patent action is contemplated by NASA.

Source: Paul McKowen of  
Martin Marietta Corporation  
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Category 01